

# Rapid Screening for *E. Coli*, Total Coliforms, *Aeromonas* and *Salmonella* in Foods and Beverages with ECA Check® & ECA Check® Plus Easygel®

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This novel, patented\* medium meets a long standing need in the Food Industry for a simple-to-use, accurate and rapid means of testing for the presence of these very important organisms. The medium is available in the standard Easygel format of one test equals one small bottle of liquid medium plus one pretreated petri dish. It does not require any autoclaving. Following are instructions for use.

## Instructions:

1. Prepare your samples and petri dishes for the inoculation procedure.
  - A. Prepare your food or beverage samples as usual.
  - B. Lay out and label the petri dishes you will be using.
2. Add 1-5 mL of your prepared test sample into the small bottle of ECA Check® (Plus) Easygel® and swirl gently to mix. You are now ready to pour your medium into the petri dishes containing the test samples.
3. Pour the sample-medium mix into a pretreated petri dish, swirl gently to cover the bottom of the dish and allow to stand until gelled. (Or place directly into the incubator and allow gelling to occur there.)
4. When the medium is solidified the dishes should be placed right side up in a 35° C. incubator for 24±2 hrs. In actuality, most samples can be accurately read as early as 18 hours incubation time.
5. Interpretation is as follows: (the use of a 10X magnifier will facilitate accurate reading of results)
  - A. *E. coli* colonies (CFUs) will appear in ambient visible light as dark blue circular dots.
  - B. *Salmonella* colonies will appear in ambient visible light as green circular dots.
  - C. Coliforms other than *E. coli* will appear as light pinkish-purple circular dots.
  - D. *Aeromonas* species will appear as clear pink/red or uncolored circular dots (colonies) and are oxidase positive (a simple spot test can be done by soaking a piece of filter paper with an aqueous solution of tetramethyl-P-phenylene diamine and picking a bacterial colony from a dish and smearing it onto the soaked filter paper. A purple spot will develop within seconds if positive). *E. coli*, *Salmonella* and *Coliforms* are all oxidase negative.

Total Coliforms are the sum of the *E. coli* (dark blue) and Coliform (pinkish-purple) colonies.

Additionally, with ECA Check® Plus Easygel®, you can verify or double check for the presence of *E. coli* by shining a long wave (366 nanometer) UV light on the back of the dishes (do this in a dark room). If any of the colonies are *E. coli*, the area around the colonies will fluoresce a bright bluish color. This fluorescence can also be used as proof for the presence of *E. coli* in a sample, thus making the medium an effective P/A test for *E. coli* if quantitative results are not needed.

The Medium is also available by special order with an additional inhibitor which prevents the *Aeromonas species* from growing, thus simplifying the color differentiation of the other three bacterial types.

Micrology Laboratories, LLC. Phone 574-533-3351 or 888-327-9435

\*U.S. Patents 6350588, 6787332, 7273719 & 7344854.

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